research and development in advanced fuels with higher breeding ratio needs to be pursued to increase the rate of deployment of nuclear power in the country.

(c) The total electricity generated in Million Units (MUs) from the atomic power stations, plant-wise and year-wise, during the last five financial years is given as below:

Stations \ Years	1997-98	1998-99	1999-2000	2000-2001	2001-2002
TAPS-1 & 2	2134	2294	2155	2408	2502
RAPS-2	#	990	1405	1600	1498
MAPS-1 & 2	1893	2188	2231	2515	2245
NAPS-1 & 2	3450	2808	3131	3044	3335
KAPS-1 & 2	2141	2894	3395	3494	3571
Kaiga-1 & 2	*		128	1900	2999
RAPS-3 & 4	**		15	1735	3049
RAPS-1	480	827	934	517	282

RAPS-2 commenced operation in June 1998 after completion of En-masse Coolant Channel Replacement and upgradation jobs.

* Kaiga-1&2 commenced commercial operations on 16.11.2000 and 16.3.2000 respectively.

** RAPS-3&4 commenced commercial operations on 1.6.2000 and 23.12.2000 respectively.

Development of ceramic matrix

892. SHRI PARMESHWAR KUMAR AGARWALLA: Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that Government are funding a project under which the work is being done by a nuclear scientist to develop a ceramic matrix that would contain and mobilize test of high level nuclear waste;

(b) if so, what is the present status of the project; and

(c) by when it is likely to be completed?

THE MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE (SHRIMATI VASUNDHARA RAJE): (a) Yes, Sir. The Department of Atomic Energy (DAE) is funding a project for the development of ceramic matrix for immobilisation of high level radioactive waste. The study is being carried out in the Institute of Science, Mumbai.

(b) So far, the studies pertaining to preparation and characterization of sodium zirconium phosphate have been completed.

(c) The funding for the study is scheduled at present to be over by the year 2004. The studies, however, are expected to continue thereafter.

Leakage of radioactive substances

†893. SHRIMATI SAVITA SHARDA: Will the PRIME MINISTER be pleased to state:

(a) whether government are aware of the fact that several incidents of leakage of the most sensitive radioactive substances of atomic plants have taken place in the country;

(b) if so, the details thereof;

(c) whether it is a fact that the construction and maintenance of atomic plants is so poor that the incidents like Chernobil are feared any time;

(d) if so, whether Government have formulated any scheme to improve maintenance and safety of the plants; and

(e) if so, the details thereof?

THE MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY AND SPACE (SHRIMATI VASUNDHARA RAJE): (a) and (b) Yes, Sir. There were a few incidents of leakage of tritiated heavy water from the nuclear power plants in India. None of these had any significant impact on public and environment. Details are available in the Annual Report of Atomic Energy Regulatory Board and are as follows:

(1) Subsequent to a leak in a moderator heat exchanger of Unit-2 of the Rajasthan Atomic Power Station on May 05, 1998, heavy water containing tritium got released into the Rana Pratap Sagar

†Original notice of the question was received in Hindi.